

Homicide Incidents Involving Children with Autism Spectrum Disorder as Victims Reported in US News Media, 2000-2019

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Short Report

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Abstract

Background

The reported prevalence of autism spectrum disorder (ASD) has increased markedly in the past two decades and children with autism are at increased risk of unintentional injury and self-inflicted injury. The risk of assaultive injury in children with autism, however, has not been well described. Our objective was to examine the characteristics of homicide incidents involving children with ASD as victims reported in US news media.

Methods

The Lexis Uni[®] database was searched to identify news media reports on homicide incidents involving autistic victims under 21 years of age in the United States from January 2000 through December 2019. Information related to the victim, perpetrator, and means of homicide in each incident was ascertained from news media reports and analyzed using descriptive statistics.

Findings:

During the 20-year period, US news media reported on 52 incidents (47 males and 5 females) in which a child with ASD died from homicide. Age of victims at death ranged from 2 to 20 years (mean = 10.4 ± 5.3 years). Parents, other caregivers, and siblings accounted respectively for 63.5%, 13.5%, and 7.7% of the perpetrators. The most commonly cited contributing factor (47.1%) was overwhelming stress from caring for the autistic child. Almost a quarter (23.1%) of the victims died from gunshot wounds, followed by drowning (19.2%), and suffocation, strangulation, or asphyxiation (19.2%).

Conclusions

Of cases reported in news media, homicide victims in children with ASD are predominantly male. Nearly 85% of the perpetrators were family members or other caregivers. Intervention programs for children with ASD should include social and mental health support for parents and other caregivers to prevent burnouts.

Background

Autism spectrum disorder (ASD) is a developmental disability characterized by deficits in social interaction and social communication, and restrictive and repetitive behaviors (Autism Speaks 2020). Symptoms appear in early childhood, typically before age 3 years, and last throughout adulthood (Autism Speaks 2020; National Institute of Mental Health 2018; Perou et al. 2013). The World Health Organization (WHO) estimates that 1 in 160 children has ASD (World Health Organization 2019). In the United States,

the reported prevalence of ASD has increased considerably over the past two decades; about 1 in 54 children is diagnosed with the disorder compared to 1 in 150 in 2000 (Centers for Disease Control and Prevention 2016). ASD is approximately four times more common among males than females and the reported prevalence is higher among non-Hispanic White Children (Baio et al. 2018).

Parents of children with ASD face unique challenges, which begin once the child is diagnosed and often increase as the child ages. These challenges include intense financial and emotional demands of providing care to the child (Hoefman et al. 2014). The most common sources of stress expressed by parents include child behavior and development, etiology of ASD, financial costs, family relationships, uncertainty with the future, and autism-related services (Hall and Graff 2010; Tehee et al. 2009). Parents and caregivers often report feeling felt misunderstood by others, including healthcare providers and family members (Celia et al. 2020). Mothers have reported spending significantly more time caring for their autistic children, feeling more fatigued, and experiencing twice as many days with stress compared to mothers of children without ASD (Smith et al. 2010). Furthermore, mental, physical and financial problems contributed most to the challenges imposed on parents giving care to children with ASD, with 40% of parents experiencing high levels of depressive symptoms (Hoefman et al. 2014).

Given these challenges, children with ASD are at an increased risk of being neglected, abused, and being exposed to harsh parenting compared to the general pediatric population (Chan and Lam 2016; Harrell 2009; Maclean et al. 2017; Sullivan and Knutson 2000). Among the identified risk factors for physical abuse and assault are autistic symptom severity and parenting stress (Chan and Lam 2016).

Additionally, research indicates that the risk of premature death in children and adolescents with ASD is 2 to 10 times as high as in the general population (Gillberg et al. 2010; Mouridsen et al. 2008; Pickett et al. 2011). A recent study provided compelling evidence that children with ASD are at a substantially heightened risk of dying from unintentional injury compared to the general pediatric population (Guan and Li 2017a). Since autism itself does not cause death, affected individuals often die from comorbid conditions such as epilepsy and other developmental conditions (Mouridsen et al. 2008; Pickett et al. 2011; Bonnet-Brilhaut 2017). As a result, autism as a contributing cause of death is often underreported, especially for intentional injury such as homicide. Despite the increasing prevalence of ASD and the excess risk of injury associated with ASD, there is no injury surveillance system specially established for children with ASD. News media has long been recognized as a useful data source for sentinel surveillance of injury incidents that are relatively rare and of public interest, such as homicide, fire-related fatalities, and drowning (Rainey and Runyan 1992; Baullinger et al 2001; Malphurs and Cohen 2002; Guan and Li 2017b). The objective of this study was to examine the characteristics of homicide incidents involving children with ASD as victims reported in US news media from 2000–2019.

Methods

A news media search was conducted using the Nexis Uni[®] database, a web-based database that features more than 15,000 news, business, and legal sources. The database was queried using terms “autism” or

“autistic” and “murder” or “kill” or “homicide” that appeared in the headline and/or lead sections of the news media. The results were limited to news articles published in the US, from January 2000 through December 2019, and in the English language. Duplicates were removed and results were downloaded and screened to identify victims ages ≤ 20 years with ASD in the United States. If multiple news medias reported on the same case, information was obtained from the most recent published article, assuming that it contained the most updated information. Information from the most recent article was checked against earlier published reports to ensure accuracy and completeness of the data.

Data recorded for the victim included age, gender, means of homicide, and year of death. In addition, the perpetrator’s age and relationship to the victim were recorded along with the stated reason for homicide and reported psychiatric condition, if provided. Some news articles provided limited information. Thus, when articles from the query were very short and provided minimal information about the case, a supplemental internet search was conducted in order to obtain the necessary information. Data were analyzed with descriptive statistics.

Results

During the 20-year study period, the query yielded a total of 706 news articles on 52 homicide incidents involving autistic child victims, including 4 homicide-suicide incidents. Of the 52 reported homicide deaths, 33 (63.5%) occurred between 2010–2019 (Fig. 1). Males accounted for 90.4% of the victims. Ages of victims at death ranged from 2 to 20 years (mean = 10.4 ± 5.3 years) (Fig. 2). On average, male victims were 2.4 years older than female victims (10.8 ± 5.0 years vs. 8.4 ± 7.4 years; $p = 0.51$).

The majority (63.5%) of perpetrators were parents, with mothers and stepmothers (28.8%) being the most frequently identified perpetrators, followed by fathers and stepfathers (25.0%), and grandparents (5.8%) (Table 1). In addition, the mother and the father were both identified as perpetrators in 2 cases. The average age of parents who perpetrated a homicide was 37.9 ± 11.1 years. Other perpetrators included siblings, legal guardians and caregivers, police officers, pastors, and physicians (Table 1). Four perpetrators (7.7%) were reported to have a mental illness, including 3 with depression and 1 with reactive attachment disorder.

Table 1
Relationships of Perpetrators to Autistic Child Homicide Victims by Sex as Reported in US News Media, January 2000 – December 2019

Relationship	Male	Female	Total
	n (%)	n (%)	n (%)
Parent	29 (55.8)	4 (80.0)	33 (63.5)
Mother/stepmother	12 (25.5)	3 (60.0)	15 (28.8)
Father/stepfather	13 (27.7)	0 (0.0)	13 (25.0)
Both mother and father	1 (2.1)	1 (20.0)	2 (4.3)
Grandparent	3 (6.4)	0 (0.0)	3 (5.8)
Sibling	4 (8.5)	0 (0.0)	4 (7.7)
Brother/stepbrother	4 (8.5)	0 (0.0)	4 (7.7)
Sister/stepsister	0 (0.0)	0 (0.0)	0 (0.0)
Guardian/caregiver ^a	6 (12.8)	1 (20.0)	7 (13.5)
Other/unrelated ^b	8 (17.0)	0 (0.0)	8 (15.4)
Total	47 (100.0)	5 (100.0)	52 (100.0)
^a Including victim's relatives, legal guardians and caregivers.			
^b Including police officers, pastors, physicians, or individuals who are not related to the victim.			

The most common means of homicide was gunshot wounds (23.1%), followed by drowning (19.2%), and suffocation/strangulation/asphyxiation (19.2%) (Table 2). Other less common mechanisms of injury are shown in Table 2. Contributing factors were mentioned in 34 of the 52 incidents, with overwhelming stress from caring for the autistic child (47.1%) being the most frequently cited factor, followed by punishment for the child's behavior (11.8%).

Table 2

Mechanisms of Injury in Homicide Incidents Involving Autistic Child Victims by Sex as Reported in US News Media, January 2000 – December 2019

Means of Homicide	Male n (%)	Female n (%)	Total n (%)
Gunshot wound	12 (25.5)	0 (0.0)	12 (23.1)
Drowning	8 (17.0)	2 (40.0)	10 (19.2)
Suffocation/strangled/asphyxiation	8 (17.0)	2 (40.0)	10(19.2)
Neglect ^a	5 (10.6)	0 (0.0)	5 (9.6)
Medication overdose	3 (6.4)	0 (0.0)	3 (5.8)
Blunt head trauma/traumatic brain injury	2 (4.3)	1 (20.0)	3 (5.8)
Stabbed/slashed	3 (6.4)	0 (0.0)	3 (5.8)
Fire	1 (2.1)	0 (0.0)	1 (1.9)
Physical abuse/blunt traumatic injury	1 (2.1)	0 (0.0)	1 (1.9)
Thrown off bridge	1 (2.1)	0 (0.0)	1 (1.9)
Unknown ^b	3 (6.4)	0 (0.0)	3 (5.8)
Total	47 (100.0)	5 (100.0)	52 (100.0)
^a Neglect includes dehydration/malnutrition, medication restriction, hypothermia, being left in hot vehicle.			
^b Means of homicide was not disclosed or stated in article.			

Discussion

This study found that news media reports of homicide incidents involving children with autism in the United States have increased in recent years, probably due to the increased prevalence and awareness of autism. Our results demonstrate that family members and other caregivers are the most common perpetrators of homicide in children with ASD, with the most frequently cited contributing factor being overwhelming stress from caring for the autistic child. It is well documented that parents of children with ASD experience substantial chronic stress due to the significant demands related to their child's special needs (Hall and Graff, 2010; Hoefman et al. 2014; Smith et al. 2010; Tehee et al. 2019; Whitmore 2016). Caregivers who are under stress are more likely to abuse, neglect, and mistreat children with special needs (Sullivan and Knutson 2000; Whitmore 2016). Thus, it is sensible and necessary that mental health services and social support for parents and other caregivers are incorporated into intervention programs for children with ASD. These services should include mindful parenting training and respite care, which is

shown to decrease stress among caregivers of children with ASD (Whitmore 2016; Bluth et al. 2014). Improved access to affordable targeted intervention programs for children with ASD utilizing professionals trained in treatment of ASD may help alleviate parents' concerns and anxiety (Hall and Graff 2010).

Our study found that the vast majority of autistic child homicide victims were male. The overrepresentation of boys in the victims is due in part to the fact that males are nearly four times as likely as females to be diagnosed with ASD. Another explanation for this disparity between sexes is that girls with ASD tend to exhibit less severe repetitive and restricted behaviors compared to boys (Supekar and Menon 2015; Hartley and Sikora, 2009). Furthermore, some studies indicate that girls with high functioning ASD exhibit better non-verbal modes of communication and display more compensatory behaviors (i.e., staying close to peers and engaging in activities) compared to boys with ASD (Rynkiewicz et al. 2016; Dean et al. 2017). In general, boys with disabilities are more likely to experience neglect and physical abuse compared to girls with disabilities (Sobsey et al. 1997). It is possible that the milder symptoms are perceived as more "socially acceptable" and caregivers thus experience less stress associated with caring for the autistic child.

There are several limitations inherent in using news media as a data source for sentinel surveillance of homicide incidents involving autistic child victims. It is likely that the cases we identified through news articles are an underestimate of the true incidence. Cases reported in news media are selected by journalists because of their newsworthiness. Therefore, characteristics of homicide incidents involving children with ASD described in this study may have limited generalizability. While some news media reports mentioned contributing factors for the homicide incidents, the larger context of violence occurring in the household and the factors associated with experiencing or perpetrating child abuse, neglect, or domestic violence were not addressed. In order to better understand the epidemiology of violence against children with ASD, it is necessary to establish injury surveillance systems for the autism population or enhance existing data sources, such as the National Violent Death Reporting System (Oybek et al. 2019). Finally, it is possible that news media reports might misclassify the condition of autism in some of the victims included in this study. The accuracy of the medical conditions in child homicide victims with disabilities or special needs reported in news articles has not been assessed against diagnoses in health records.

Conclusion

Despite the limitations of sentinel surveillance data from news media reports, our study underscores the needs for better understanding the risk of violence and injury in children with ASD. Our results indicate that the vast majority of perpetrators in homicide incidents involving autistic child victims are family members or caregivers and that many of the perpetrators are overwhelmed by stress from caring for the child with special needs. This finding supports the need to expand intervention programs for children with ASD to include social and mental health support for family members and caregivers to prevent burnouts.

Declarations

Ethics Approval and Consent to Participate

This study was deemed not human subjects research Under 45 CFR 46 by the Columbia University Institutional Review Board (New York, NY).

Consent for Publication

Not Applicable.

Availability of Data and Materials

The NexisUni⁰ database is available from the LexisNexis corporation.

Competing Interests

CD is a member of the editorial board and GL serves as Editor-in-Chief of Injury Epidemiology. They were not involved in the peer-review or handling of this manuscript. The authors have no other competing interests to disclose.

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Authors Contribution

JG collected and analyzed the data, reviewed the literature, and drafted the manuscript. AB, CD and SC contributed to literature review and critical revisions of the manuscript. GL conceived the study, secured funding, supervised the literature search and statistical analysis, and contributed to critical revisions of the manuscript. All the authors read and approved the final manuscript.

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References

Autism Speaks. What Is Autism? 2016 [Available from: <https://www.autismspeaks.org/what-autism>].

- Baio J, Wiggins L, Christensen DL, Maenner MJ, Daniels J, Warren Z, et al. Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years - Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2014. *MMWR Surveill Summ.* 2018;67(6):1-23.
- Baullinger J, Quan L, Bennett E, Cummings P, Williams K. Use of Washington State newspapers for submersion injury surveillance. *Inj Prev.* 2001;7(4):339-42.
- Bluth K, Roberson PN, Billen RM, Sams JM. A Stress Model for Couples Parenting Children With Autism Spectrum Disorders and the Introduction of a Mindfulness Intervention. *J Fam Theory Rev.* 2013;5(3):194-213.
- Bonnet-Brilhault F. [Autism: An early neurodevelopmental disorder]. *Arch Pediatr.* 2017;24(4):384-90.
- Celia T, Freysteinson W, Fredland N, Bowyer P. Battle weary/battle ready: A phenomenological study of parents' lived experiences caring for children with autism and their safety concerns. *J Adv Nurs.* 2020;76(1):221-33.
- Centers for Disease Control and Prevention. Data and Statistics 2016 [Available from: <http://www.cdc.gov/ncbddd/autism/data.html>].
- Chan KKS, Lam CB. Parental maltreatment of children with autism spectrum disorder: A developmental-ecological analysis. *Research in Autism Spectrum Disorders.* 2016;32:106-14.
- Dean M, Harwood R, Kasari C. The art of camouflage: Gender differences in the social behaviors of girls and boys with autism spectrum disorder. *Autism.* 2017;21(6):678-89.
- Gillberg C, Billstedt E, Sundh V, Gillberg IC. Mortality in autism: a prospective longitudinal community-based study. *J Autism Dev Disord.* 2010;40(3):352-7.
- Guan J, Li G. Injury mortality in individuals with autism. *Am J Public Health.* 2017a;107(5):791-3.
- Guan J, Li G. Characteristics of unintentional drowning deaths in children with autism spectrum disorder. *Inj Epidemiol.* 2017b;4(1):32.
- Hall HR, Graff JC. Parenting challenges in families of children with autism: a pilot study. *Issues Compr Pediatr Nurs.* 2010;33(4):187-204.
- Harrell E. Crime against persons with disabilities, 2009-2015-Statistical tables. US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. 2017.
- Hartley SL, Sikora DM. Sex differences in autism spectrum disorder: an examination of developmental functioning, autistic symptoms, and coexisting behavior problems in toddlers. *J Autism Dev Disord.* 2009;39(12):1715-22.

Hoefman R, Payakachat N, van Exel J, Kuhlthau K, Kovacs E, Pyne J, et al. Caring for a child with autism spectrum disorder and parents' quality of life: application of the CarerQoL. *J Autism Dev Disord*. 2014;44(8):1933-45.

Maclean MJ, Sims S, Bower C, Leonard H, Stanley FJ, O'Donnell M. Maltreatment Risk Among Children With Disabilities. *Pediatrics*. 2017;139(4).

Malphurs JE, Cohen D. A newspaper surveillance study of homicide-suicide in the United States. *Am J Forensic Med Pathol*. 2002;23(2):142-8.

Mouridsen SE, Bronnum-Hansen H, Rich B, Isager T. Mortality and causes of death in autism spectrum disorders: an update. *Autism*. 2008;12(4):403-14.

National Institute of Mental Health. Autism Spectrum Disorder 2018 [Available from: <https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index.shtml>].

Nazarov O, Guan J, Chihuri S, Li G. Research utility of the National Violent Death Reporting System: a scoping review. *Inj Epidemiol*. 2019;6:18.

Perou R, Bitsko RH, Blumberg SJ, Pastor P, Ghandour RM, Gfroerer JC, et al. Mental health surveillance among children—United States, 2005-2011. *MMWR Suppl*. 2013;62(2):1-35.

Pickett J, Xiu E, Tuchman R, Dawson G, Lajonchere C. Mortality in individuals with autism, with and without epilepsy. *J Child Neurol*. 2011;26(8):932-9.

Rainey DY, Runyan CW. Newspapers: A Source for Injury Surveillance? *Am J Public Health*. 1992;82(5):745-6.

Rynkiewicz A, Schuller B, Marchi E, Piana S, Camurri A, Lassalle A, et al. An investigation of the 'female camouflage effect' in autism using a computerized ADOS-2 and a test of sex/gender differences. *Mol Autism*. 2016;7:10.

Smith LE, Hong J, Seltzer MM, Greenberg JS, Almeida DM, Bishop SL. Daily experiences among mothers of adolescents and adults with autism spectrum disorder. *J Autism Dev Disord*. 2010;40(2):167-78.

Sobsey D, Randall W, Parrila RK. Gender differences in abused children with and without disabilities. *Child Abuse Negl*. 1997;21(8):707-20.

Sullivan PM, Knutson JF. Maltreatment and disabilities: a population-based epidemiological study. *Child Abuse Negl*. 2000;24(10):1257-73.

Supekar K, Menon V. Sex differences in structural organization of motor systems and their dissociable links with repetitive/restricted behaviors in children with autism. *Mol Autism*. 2015;6:50.

Tehee E, Honan R, Hevey D. Factors Contributing to Stress in Parents of Individuals with Autistic Spectrum Disorders. *Journal of Applied Research in Intellectual Disabilities*. 2009;22(1):34-42.

Whitmore KE. Respite Care and Stress Among Caregivers of Children With Autism Spectrum Disorder: An Integrative Review. *J Pediatr Nurs*. 2016;31(6):630-52.

World Health Organization. Autism Spectrum Disorders 2019 [Available from: <https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders>].

Figures

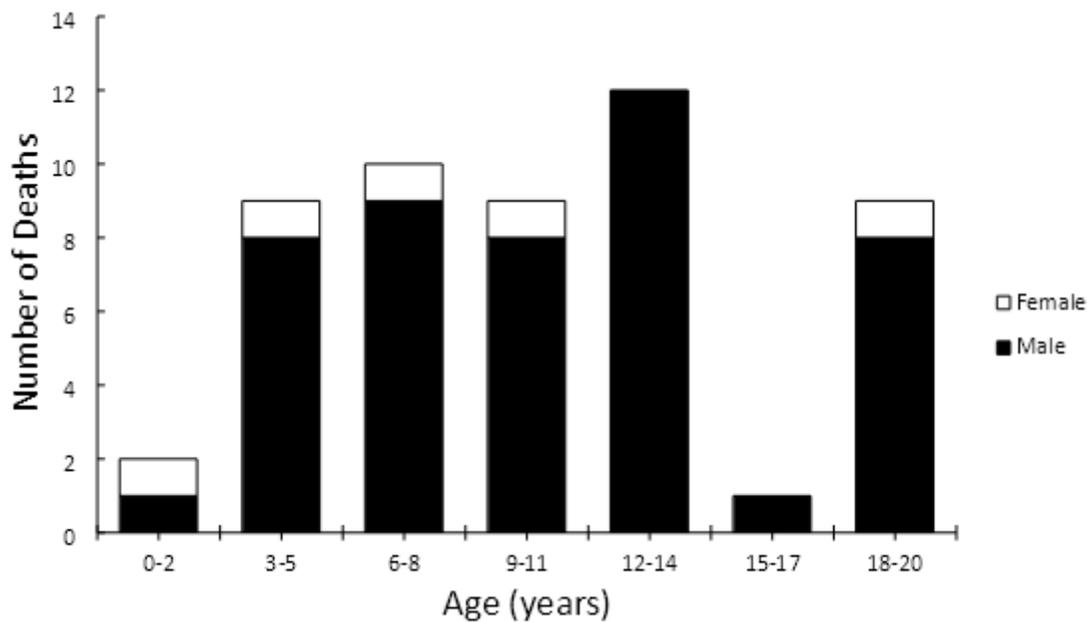


Figure 1

Frequency Distribution of Autistic Child Homicide Victims by Age and Sex as Reported in US News Media, January 2000 – December 2019

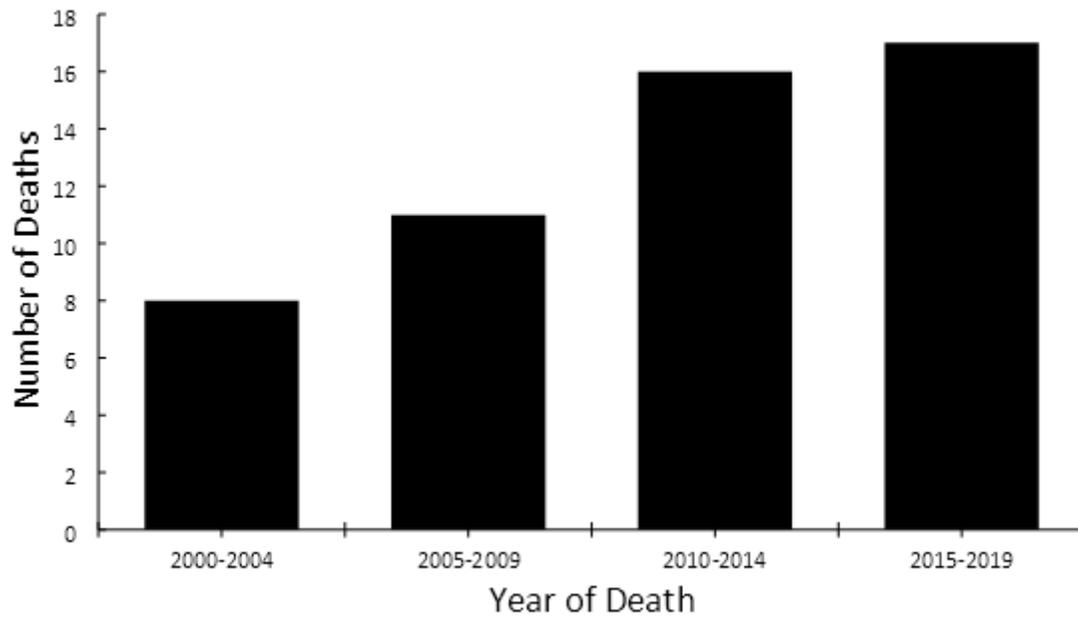


Figure 2

Frequency Distribution of Autistic Child Homicide Victims by 5-Year Period as Reported in US News Media, January 2000 – December 2019